

CLAIMS

1. An array speaker system constituted by arraying a plurality of speaker units, said array speaker system comprising:

a means for inputting front-side channel signals for instructing reproduction of sound at a front side of a listener and rear-side channel signals for instructing reproduction of sound at a rear side of the listener;

a means for driving the speaker units with weights using weight coefficients based on a Bessel function with respect to the front-side channel signals; and

a means for driving the speaker units with respect to the rear-side channel signals in such a way that sound is reflected at at least one sound reflection position such as a wall surface or a ceiling and is then applied with a prescribed delay value so as to form a sound beam reaching the rear-side of the listener.

2. An array speaker system according to claim 1, which is constituted by a first array speaker arranged at a left side of a display and a second array speaker arranged at a right side of the display.

3. An array speaker system according to claim 2, wherein the front-side channel signals are formed using a left channel signal, a right channel signal, and a center channel signal, and the rear-side channel signals are formed using a surround left channel signal and a surround right channel signal,

and wherein in the first array speaker arranged at the left side of the display, the left channel signal and the center channel signal are subjected to weighting using the weight coefficients based on the Bessel function, and the surround left channel

signal is subjected to sound beam processing,

and wherein in the second array speaker arranged at the right side of the display, the right channel signal and the center channel signal are subjected to weighting using the weight coefficients based on the Bessel function, and the surround right channel signal is subjected to sound beam processing.

4. An array speaker system according to claim 1, wherein a single array speaker is arranged in front of the listener, and wherein in the array speaker, a left channel signal, a right channel signal, and a center channel signal, all of which form the front-side channel signals, are subjected to weighting using the weight coefficients based on the Bessel function, and a surround left channel signal and a surround right channel signal, both of which form the rear-side channel signals, are subjected to sound beam processing.

5. An array speaker system including an array speaker in which a plurality of speaker units are arrayed in a matrix manner,

wherein a first audio signal for instructing reproduction of sound at a setup position of the array speaker is subjected to weighting using a weight coefficient based on a Bessel function so as to drive the speaker units,

and wherein a second audio signal for instructing reproduction of sound at a specific position other than the setup position of the array speaker is subjected to delay processing so as to drive the speaker units in such a way that a sound beam reaching the specific position is formed.